

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PROMOS TECHNOLOGIES, INC.,)

Plaintiff,)

v.)

FREESCALE SEMICONDUCTOR, INC.,)

Defendant.)

REDACTED PUBLIC VERSION

C.A. No. 06-788 (JJF)

**CONFIDENTIAL – SUBJECT
TO PROTECTIVE ORDER**

FILED UNDER SEAL

**OPENING BRIEF IN SUPPORT OF FREESCALE’S MOTION TO COMPEL PROMOS
TO PROVIDE INFRINGEMENT CONTENTIONS AND LICENSING INFORMATION**

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NATURE AND STAGE OF THE PROCEEDINGS

ProMOS brought this “revenge” patent infringement lawsuit against Freescale in December 2006, a few weeks after Freescale sued ProMOS for patent infringement in Texas. So that the two cases would remain in “symmetry” and taking into account the relative filing dates of the two lawsuits, this Court set a relatively tight schedule (4/20/07 tr. 11). That schedule includes a Markman hearing on December 13, 2007 with claim construction briefing beginning October 23, and fact and expert discovery cutoff dates of January 21 and April 21, 2008, respectively. Trial is set to begin June 30, 2008.

Despite the schedule established for its benefit, ProMOS has since refused to provide its most basic contentions of infringement, which are a critical component of maintaining symmetry and which Freescale needs to defend itself in Delaware. In Texas, Freescale provided its contentions of infringement, as required by local rule, at the outset of the case, before ProMOS had produced any documents. Freescale had done its homework based on publicly available information and provided claim charts that read all of the asserted claims on the accused products.

By contrast, ProMOS in Delaware refused at the outset to provide even preliminary infringement contentions, except for one claim and two product types for each patent, even though it asserted all 106 different patent claims against a large number of Freescale’s products. It refused notwithstanding that substantial technical information on all the products was publicly available – the same kind of product information on which ProMOS based the (few) contentions it did provide. ProMOS has still refused to provide infringement contentions and its claim constructions relevant to infringement, even though it has since received from Freescale thousands of pages of additional technical information.

Without the fundamental information of ProMOS's infringement contentions, it is impossible for Freescale to identify claim terms to be submitted to the Court for construction in October, as required by the scheduling order, and to develop completely its own contentions of noninfringement and invalidity. Thus, Freescale asks that ProMOS be ordered to provide its contentions of infringement and claim construction relevant to infringement, based on the voluminous, publicly-available information on Freescale's website and the additional extensive information Freescale has produced to date, as requested by interrogatories 1, 2-3 (to the extent they affect ProMOS's claim readings), 20 and 24. We have asked ProMOS to provide its contentions, but it refuses, asserting essentially that it should not have to provide *any* additional contentions until it has analyzed, for *all* products that it is accusing of infringement, *all* the information produced to it (or which it might further request).

Similarly, Freescale has asked ProMOS to provide certain information on licensing of the patents in suit as requested by requests for admission nos. 4-6 and interrogatory no. 9 (and related document requests 26, 62, and 64-65). This information will be relevant to damages and other issues. ProMOS should either provide the information now, or be foreclosed later from using any evidence of licensing.

I. PROMOS SHOULD BE ORDERED TO PROVIDE ITS CONTENTIONS RELATING TO INFRINGEMENT.

While at the same time refusing early on in discovery to provide any contentions of infringement from the vast amount of publicly available information, ProMOS sought vastly overbroad discovery of Freescale. Then, when Freescale declined to open the doors to all of its technical information, asking ProMOS either to identify accused products or set parameters on the kinds of products it wanted information for, ProMOS aggressively blamed Freescale and sought to turn that legitimate refusal into an excuse for ProMOS's failure to provide

contentions.¹ ProMOS improperly continues to refuse to provide contentions, arguing that it still needs to analyze information. That argument is without any merit. As explained below, ProMOS could have provided contentions long ago, and certainly it can provide contentions now.

A. FREESCALE NEEDS PROMOS'S CONTENTIONS
RELATING TO INFRINGEMENT OF THE CHAN
PATENTS.

1. The Chan Patents, Which ProMOS Is Asserting
Broadly, Are Very Narrow.

The two Chan patents, U.S. Pat. Nos. 5,488,709 and 5,732,241, are directed to a cache memory apparatus and a computer system with a cache memory and cache controller (Exs. E, F). ProMOS for months persisted in pursuing broadly the two Chan patents against Freescale's entire product line, seeking in-depth discovery of essentially all documents concerning all of Freescale's products. To support that improper discovery, ProMOS described the Chan patents in exceedingly broad terms, characterizing them as the "cache memory patents" and as "involve[ing] cache memory," which ProMOS defined as "a supplementary system that temporarily stores frequently used instructions and data for quicker processing by the central processor of the computer" (ProMOS's motion to compel, D.I. 29, pp. 1-2). Based on that facially overbroad scope, ProMOS sought unbounded discovery of all "Freescale Products," defined by ProMOS as all "microcontrollers, microprocessors, processors, digital signal processors, controller cores, processor cores *or other components or goods that use, incorporate, work with or rely on cache memory*" (Ex. A to ProMOS's motion, p. 5) (emphasis added). In

¹ As an example, ProMOS earlier filed a baseless motion to compel on July 6, later withdrawn, seeking technical documents for some 100 products which it had identified only hours before. Its new motion filed August 23 continues this tactic, seeking to blame, erroneously, Freescale for ProMOS's failure to identify infringing products. Freescale's response to that motion will fully detail the errors in the facts asserted by ProMOS.

other words, ProMOS attempted to obtain discovery of all products of any kind that use cache memory in any way, in plain disregard of the actual, limited scope of the Chan patent claims.²

Yet the Chan patents are very narrow in scope in view of the extensive prior art and the statements made and positions taken in the PTO to procure issuance of the patents over the prior art. Contrary to ProMOS's (unexplained) position, the narrow Chan patents clearly cannot be construed to cover all uses of cache memories for many reasons, including the following:

First, as the Chan patents themselves acknowledge, cache memory had been used in semiconductor technology for years before Chan.

Second, the claims of Chan '709 are directed to a cache memory apparatus having a particular structure and functionality, and the claims of Chan '241 are directed to "computer systems" containing, among other things, the particular Chan cache claimed in the Chan '709 patent in combination with a cache controller configured in a special manner. Those limitations cannot be ignored.

Third, the specification makes clear the patents' limited scope. For example, Figure 4 of the specification identifies as "prior art" a computer system with a cache memory and cache controller, thus emphasizing that only very particular systems of cache memories and controllers could possibly be within the scope of the Chan patents (Exs. E, F). As another

² This request encompassed virtually all of Freescale's product lines. Freescale is a manufacturer of semiconductor solutions for cars, phones, networks and other applications. Its product lines include over 53 semiconductor product classes, 34 of which are microprocessor product classes. Each microprocessor product class comprises a number of product families, and each microprocessor product family contains many different microprocessor products. In sum, Freescale's product line includes over 220 different microprocessor products, most of which include a cache memory of some sort. While cache memory is part of most of Freescale's products, Freescale is not a memory manufacturer like ProMOS.

example, the Chan specification acknowledges that the prior art Intel 486 microprocessor, the product for which the Chan embodying product was developed, was provided with an embedded cache memory.

Fourth, because cache memories were so well-known prior to the Chan patents, the inventor had a difficult time convincing the PTO to grant the two Chan patents. With the Chan '709 patent, which is directed to a cache memory apparatus with particular structure and functionality, the inventor amended the claims four times before the PTO would grant the patent. Acquiescing to the fact that most limitations of its cache apparatus claims were found in the prior art cited by the PTO, the inventor argued that the distinguishing feature of the claims was not just any cache memory, but instead "a cache memory which includes a memory write register for buffering data received from a host port and selectively providing that data to a RAM, to a system port, or to both, and a write back register for holding data received from the RAM and selectively providing that data to a system port." Thus, these arguments from the inventor apply to narrow the claims.

Similarly, the inventor had to amend the claims of the Chan '241 patent four times, each time incorporating additional structure and features to its computer system claims before the PTO granted the patent. To gain allowance, the inventor argued that the claims covered a computer system including, among other things, "a dual port cache memory coupled between a host processor and a system memory" with "one [port] connected to a host data bus of the system memory" and "having registers coupling cache storage locations to a host port and to a system port, wherein a data path between the host data bus and the system data bus is operably decoupled by buffering and selective provision of data to and from the cache storage locations by

the registers, so as to allow concurrent transfer of data to and from the dual port cache memory.”

Again, these inventor arguments apply to narrow the claims.

Given the limited nature of ProMOS’s exclusion rights under its patents and the vast scope of permissible use of cache memory, ProMOS cannot rightfully claim all products using a cache memory, and cannot legitimately assert its patents against any product which does not have the specific structure and functionality which was required for patent issuance. Yet ProMOS has refused to limit its allegations of infringement to products meeting the above criteria and has failed to give any explanation as to how it could legitimately maintain a claim scope broad enough to cover products which do not meet these criteria. ProMOS’s failure to provide its basic contentions to support its infringement allegations is interfering with Freescale’s preparation of its defenses, both noninfringement and invalidity. Moreover, Freescale needs this information well in advance of the claim construction proceedings, which are fast approaching.

2. ProMOS’s (Highly Limited) Responses Are Incomplete And Inadequate.

Freescale served three standard interrogatories asking for ProMOS’s contentions of infringement, both direct and indirect, with respect to all accused products and all patent claims accused of being infringed (interrogatory nos. 1-3) (Ex. A). Freescale has also served a basic claim construction interrogatory (interrogatory no. 24) (Ex. D). In response, with respect to infringement of the two Chan patents, ProMOS simply referred to claim readings it had done before the litigation and which it had given Freescale in the course of licensing discussions relating to Freescale’s patents (Ex. A; Ex. B tabs 2 and 3). Those claim readings, however, were limited to two processor cores and one claim (claim 1) for each of the two patents. ProMOS similarly declined to answer the related interrogatory on claim construction, even though it asked

a comparable interrogatory of Freescale and Freescale in response has given substantial reasons why the claims must be construed narrowly in various respects.³

ProMOS's response is seriously inadequate. ProMOS has asserted all 52 Chan claims against every one of roughly 150 accused products. That number breaks down into some 21 processor cores, and each of those is different enough from the others that ProMOS's claim reading will likely not apply. While ProMOS's interrogatory response provides, for each of the two Chan patents, an identification of where in two processor cores each claim limitation of claim 1 is allegedly found, it fails to address the other 50 claims of the Chan patents and the other 19 accused processor cores (Ex. B, tabs 2 and 3). This is a serious and problematic deficiency that is severely interfering with Freescale's litigation of this case. The claims ProMOS has asserted have a variety of limitations not involved in the two claims for which it did claim readings. Freescale has no idea how ProMOS is interpreting those limitations or how it would read them on any Freescale product, or whether ProMOS truly intends to assert all of the claims.

Freescale cannot litigate this case without having the fundamental information of ProMOS's contentions relating to infringement. Most pressing is that claim construction briefing is upcoming and without ProMOS's contentions, Freescale will not be in a position even to determine the claim terms that it will argue need to be construed.

³ Even though ProMOS has the burden of proof and has provided no claim constructions and only 0.4% of its claim readings, Freescale has provided a number of contentions detailing how the Chan patent claims are limited in scope and cannot be construed so broadly as to cover Freescale's products (Ex. K, p. 2), and it has raised issues, such as how ProMOS could interpret its claims to cover the i-cache, in correspondence and meet-and-confer sessions. Similarly, Freescale has also set forth contentions with respect to the Fortin patent, as discussed below, that physical vapor deposition must be construed as limited to physical vapor deposition and not to cover chemical vapor deposition (Ex. K, p. 5). There is no reason ProMOS cannot provide its positions on these issues.

Furthermore, ProMOS is using its unilateral refusal to provide contentions as a reason improperly to keep the door open on vast amounts of discovery. For example, ProMOS accuses products of infringing that have an instruction cache (“i-cache”). Yet, it is well known that i-caches involve a unidirectional flow of information (instructions) in the direction of main memory to i-cache memory to processor, while both Chan patents require bidirectional flow of data, i.e. data flow in both directions. We have pointed out this issue to ProMOS but it still maintains these products on its list of accused products, while still refusing to provide an explanation of how and why it is accusing these products.⁴

3. ProMOS Has No Excuse For Failing To Provide Contentions.

ProMOS even before filing this case had full access through Freescale’s publicly available website to substantial technical information, such as users’ manuals, about Freescale’s products. These manuals are highly detailed because the users of Freescale’s products are engineers who need to understand the design specifications in order to imbed Freescale’s processors into their own products. This information undeniably was sufficient for ProMOS to make a determination of accused products and to do initial claim readings, as this publicly available information was what ProMOS used for its identification of accused products and the limited claim readings it did give Freescale.

Moreover, ProMOS has had additional information produced by Freescale in discovery, including the information used by Freescale’s design engineers when designing the circuitry of interest in this case. In particular, ProMOS has had the requirement specifications,

⁴ ProMOS has even seemed to agree that its list of accused products included products that should not be on the list and yet it has maintained those products as accused products when it supplemented the list.

technical reference manuals, and schematics and circuit diagrams, to the extent they exist. Freescale on July 6 gave all this technical information to ProMOS for some 49 products that ProMOS had by then specifically accused, and Freescale produced by August 3 and 16 this information for the roughly 100 additional products identified by ProMOS on July 6. This information is plainly sufficient to allow ProMOS to give infringement contentions.

We expect that ProMOS will argue, as it has in meet-and-confer sessions, that it should not have to provide *any* additional infringement contentions until it has had (an indefinite amount of) time to review the RTL computer code. RTL code is written by design engineers when designing circuitry to meet the requirements specifications developed by product engineers. While we do not agree with ProMOS's assertion that it needs RTL code to assess alleged infringement of the Chan claims, the RTL code has now been made available to ProMOS, and there is no reason it could not provide its contentions by September 17, the same day it (finally) agreed to provide contentions for the Fortin patent (see below). Moreover, even if ProMOS were correct that the RTL code provided some relevant additional information, ProMOS cannot suggest, and has not, that the substantial other information provided by Freescale is at an insufficient level of technical detail to allow ProMOS to perform a detailed claim reading for all the accused products, even if later information might supplement its response. Indeed, ProMOS has long had *more* information available to it than when it did the two claim readings before suit.

For example, the Chan claims require that the cache memory have two ports. The information that ProMOS has long had (including the user manuals and the information used by Freescale's design engineers) shows whether the cache memories imbedded in the accused processor products have ports, and if so, how many, so that ProMOS is fully able to assess

whether the cache memories have two ports. Similarly, the Chan patents require that the cache memories have (a) a “write-back” register coupled to a system port and (b) a “memory write” register coupled to a host processor port. ProMOS can readily determine from the documentation it has whether the accused processor products have caches that it may argue meet these limitations, and if so, how and why it would contend that the limitations are met, as that level of detail about cache operation is in the Freescale documentation that ProMOS has.

Accordingly, given that it is critical for Freescale to receive ProMOS’s contentions of infringement and claim construction immediately, ProMOS should be ordered to provide its contentions by September 24, 2007, based on all the information produced to ProMOS or otherwise available to it. ProMOS has been on ample notice of the need for it to provide contentions and presumably has already performed claim readings and formed a view of the construction of the claims relevant to its infringement contentions.

B. FREESCALE NEEDS PROMOS’S CONTENTIONS
RELATING TO INFRINGEMENT OF THE FORTIN
PATENT.

The Fortin patent, U.S. Pat. No. 6,670,267, relates to a fabrication method for tungsten plugs used in semiconductor integrated circuits and specifically, the “invention relates to physical vapor deposition of titanium nitride” (“PVD”) in such a process (Ex. G, col. 1, ll. 9-12). The claims of Fortin must be restricted to PVD and cannot be read to cover any processes that form a layer of titanium nitride by chemical vapor deposition (“CVD”). In particular, the Fortin patent claims “forming a titanium nitride layer over the structure *by physical vapor deposition . . .*” or some variation thereof in every claim (Ex. G) (emphasis added). Moreover, to overcome prior art cited by the Examiner during prosecution of the Fortin patent, the inventor specifically distinguished between PVD and CVD, and then represented to the PTO that, “[i]n any event, CVD is not PVD or a type of PVD” (*see* Amendment dated July 30, 2002, at p. 9)

(original emphasis) (Ex. H). Thus, Freescale cannot possibly infringe Fortin because Freescale forms a titanium nitride layer by CVD.

During this litigation, however, ProMOS has tried to obfuscate the well-known and previously-admitted differences between PVD and CVD. ProMOS has made vague and untenable suggestions, without regard to the most basic of legal requirements governing the construction of patent claims, that somehow the terminology surrounding PVD and CVD has become unclear over the past few years (*see, e.g.*, ProMOS's response to Freescale's Interrogatory No. 18: "[T]he line between chemical vapor deposition and physical vapor deposition [is not] well settled. Indeed more recent developments in the art have blurred that line.") (Ex. C). Moreover, ProMOS has not even attempted to offer any evidence to support this litigation-induced assertion. Instead, ProMOS has deliberately avoided providing any contentions regarding the meaning of the Fortin claim terms (*see* responses to interrogatories nos. 20 and 24) (Ex. D).

Although ProMOS gave no explanation of any kind as to how, factually or legally, a CVD process could infringe the patents, Freescale proceeded to produce documentation about its CVD process to ProMOS, including detailed process recipes. ProMOS has now committed by September 17 to dropping the Fortin patent, or providing contentions as to how it would interpret the patent to cover CVD and how Freescale's CVD processes could possibly infringe. The contentions that Freescale needs are in response to interrogatories 1-3, 20 and 24, as they relate to the Fortin patent and how ProMOS is construing the term PVD to cover CVD, despite the prosecution history to the contrary (Exs. A, D). If ProMOS drops the patent, or if those contentions are sufficient, then this issue will be moot. Nevertheless, despite Fortin's explicit claim language expressly requiring the formation of a titanium nitride layer by PVD, and

the explicit disclaimer in the Fortin prosecution history of forming this layer by CVD, ProMOS steadfastly has insisted (without providing any substantiation) that certain Freescale processes which form this layer by CVD infringe the Fortin patent. So this issue may well not be mooted by whatever ProMOS does on September 17.

II. PROMOS SHOULD BE ORDERED TO PRODUCE LICENSING INFORMATION.

Freescale has sought information from ProMOS on all licensing of the patents in suit. In particular, requests for admission 4-6 ask ProMOS to admit that the three patents in suit have never been licensed, and interrogatory no. 9 asks ProMOS to identify each attempt to license the patents in suit, whether by ProMOS or the prior owner of the patents, Mosel Vitelic. Document requests 26, 62 and 64-65 seek related documents, including all evidence, if any, of the licensing by any person or entity of any of the three patents asserted by ProMOS in this lawsuit.

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CONCLUSION

For the foregoing reasons, Freescale's motion to compel should be granted. A form of order is attached to Freescale's motion.

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Dated: August 23, 2007
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CERTIFICATE OF SERVICE

I hereby certify that on August 30, 2007, I caused the foregoing to be electronically filed with the Clerk of the Court using CM/ECF which will send electronic notification of such filing to the following:

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Additionally, I hereby certify that true and correct copies of the foregoing were caused to be served on August 30, 2007 upon the following individuals in the manner indicated:

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